



**BAT760** 

#### SURFACE-MOUNT SCHOTTKY BARRIER RECTIFIER

### **Features**

- Very Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)
- This part is qualified to JEDEC standards (as references in AEC-Q) for High Reliability.
  - $\underline{https://www.diodes.com/quality/product-definitions/}$
- An Automotive-Compliant Part is Available Under Separate Data Sheet (<u>BAT760Q</u>)

### **Mechanical Data**

- Package: SOD323
- Package Material Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: Cathode Band
- Terminals: Finish Matte Tin Plated Leads, Solderable per MIL-STD-202. Method 208 ©3
- Weight: 0.004 grams (Approximate)



Top View

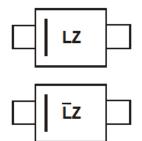
## **Ordering Information** (Note 4)

Part Number	Paakaga	Packing	
Part Number	Package	Qty.	Carrier
BAT760-7	SOD323	3,000	Tape & Reel

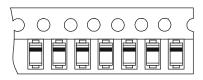
Notes:

- 1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
- 2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
- 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
- 4. For packaging details, go to our website at https://www.diodes.com/design/support/packaging/diodes-packaging/.

# **Marking Information**



 $LZ \& \overline{L}Z = Product Type Marking Code$ 





## **Maximum Ratings** (@TA = +25°C, unless otherwise specified.)

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>R</sub> WM V <sub>R</sub>	30	٧
RMS Reverse Voltage	V <sub>R</sub> (RMS)	21	V
Average Rectified Output Current	lo	1	Α
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	5.5	А

# **Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	$P_{D}$	250	mW
Typical Thermal Resistance Junction to Ambient (Note 5)	Reja	500	°C/W
Operating and Storage Temperature Range	$T_{J}$ , $T_{STG}$	-65 to +150	°C

# Electrical Characteristics (@T<sub>A</sub> = +25°C unless otherwise specified.)

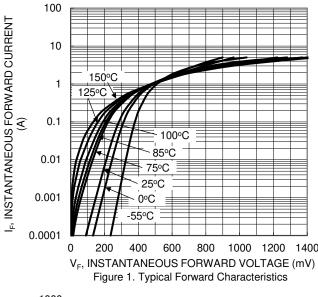
Characteristic	Symbol	Min	Тур	Max	Unit	Test Conditions
Reverse Breakdown Voltage (Note 6)	$V_{(BR)R}$	30	_	_	V	$I_R = 500 \mu A$
		_	245	270		$I_F = 10mA$
Forward Voltage Drop	VF		320	350	mV	IF = 100mA
			495	550		$I_F = 1A$
		_	3.0	10		$V_R = 5V$
Leakage Current (Note 6)	IR		3.5	20	μΑ	$V_R = 8V$
			5.0	50		$V_R = 15V$
Total Capacitance	Ст	_	25	_	pF	f = 1MHz, V <sub>R</sub> = 5VDC

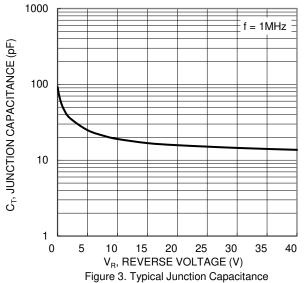
Notes:

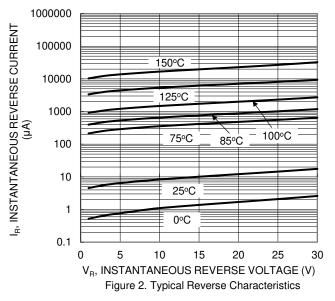
<sup>5.</sup> Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at http://www.diodes.com/package-outlines.html.

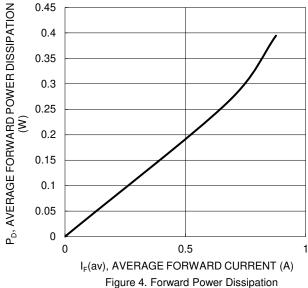
<sup>6.</sup> Short duration pulse test used to minimize self-heating effect.









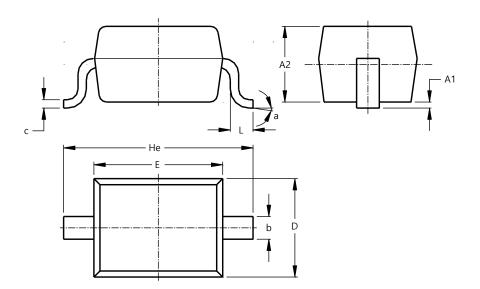




# **Package Outline Dimensions**

Please see http://www.diodes.com/package-outlines.html for the latest version.

### SOD323

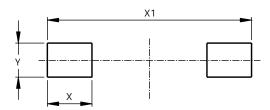


SOD323					
Dim	Min	Max	Тур		
<b>A</b> 1		0.10	0.05		
A2	1.00	1.10	1.05		
b	0.25	0.35	0.30		
С	0.10	0.15	0.11		
D	1.20	1.40	1.30		
Е	1.60	1.80	1.70		
He	2.30	2.70	2.50		
L	0.20	0.40	0.30		
а	0º	8º			
All Dimensions in mm					

# **Suggested Pad Layout**

 $Please \ see \ http://www.diodes.com/package-outlines.html \ for \ the \ latest \ version.$ 

#### **SOD323**



Dimensions	Value (in mm)
Х	0.590
X1	2.700
Υ	0.450



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